

Construction Storm Water Presentation


Chattanooga Environmental
Field Office

May 30, 2006



Receive Complete NOI

- Original signature
- Appropriate fee
- SWPPP

 Department of Environment and Conservation Division of Water Pollution Control CONSTRUCTION ACTIVITY - STORM WATER DISCHARGES NOTICE OF INTENT (NOI)				
Site Name:		Existing Tracking No.:		
Street Address or Location:		Start date:		
Site Description:		Estimated end date:		
County(ies):		Latitude:		
Does a topographic map show diked or solid blue lines <input type="checkbox"/> and/or wetlands <input type="checkbox"/> on or adjacent to the construction site?		Longitude:		
If wetlands are located on-site and may be impacted, attach wetlands delineation report.		Acres Disturbed:		
If an Aquatic Resource Alteration Permit has been obtained for this site, what is the permit number? ARAP permit No.:				
Receiving waters:				
Attach the SWPPP with the NOI <input type="checkbox"/> SWPPP Attached Attach a site location map <input type="checkbox"/> Map Attached				
Site Owner/Developer: (person, company, or legal entity that has operational or design control over construction plans and specifications)				
Site Owner/Developer Contact: (individual responsible for site)		Title or Position:		
Mailing Address:		City:	State:	Zip:
Phone: ()		E-mail:		
Optional Contact:		Title or Position:		
Address:		City:	State:	Zip:
Phone: ()		E-mail:		
Owner/Developer Certification (must be signed by president, vice-president or equivalent, or ranking elected official) I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
Owner/Developer name and address, print or type		Signature		Date
Contractor(s) Certification (must be signed by president, vice-president or equivalent, or ranking elected official) I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above, and/or my inquiry of the person directly responsible for assembling this NOI, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements.				
Primary contractor name and address, print or type		Signature		Date
Other contractor name and address, print or type		Signature		Date
Other contractor name and address, print or type		Signature		Date
OFFICIAL STATE USE ONLY				
Received Date	Signature	Field Office	Permit Number	High Quality Water
Fee(s)	Tribal Aquatic Permit	Inspected/Revising Station	INR	Notice of Coverage Date

CON-0940 (Rev. 05-05) 820A-2358 and 2400

(continued on reverse)

Review of NOI

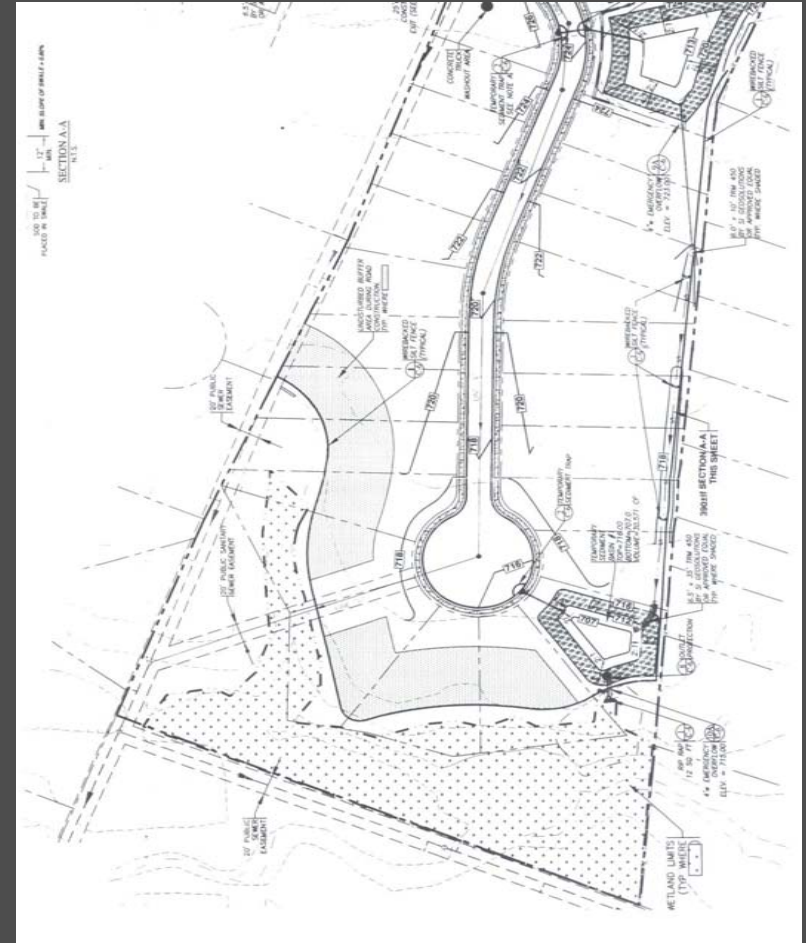
- Original signature present?
- Contractor signature present?
- Water resources present at the project?
 - Are they on the “impaired” or “high quality waters” lists?
- Threatened or Endangered Species present?

Review of SWPPP

- Narrative portion
 - Describes how project will be developed
 - Describes the phases of the project
 - Provide adequate guidance
 - Includes calculations for sizing basins
 - Signed certification

Review of SWPPP/Plat Drawing

- Cut and fill areas shown
- Water resources identified
- Sediment basins properly sized
- Buffer zones identified
- Steep slopes present
- Types of soils identified



Pre-Permit - On-site Inspection Conducted

- Why take the time to conduct a site inspection?
 - Verify presence/absence water resources
 - Determine adjoining land uses
 - Provide “on the ground” guidance for needed SWPPP modifications
 - Past experiences have demonstrated that a site visit is needed – pre-permit effort reduces post-permit problems

Lessons Learned - Problem Soils

Wetland under
Environmental
Easement

Sediment Laden
Storm Water

JUL 3 2003

Lessons Learned - Problem Soils



Toe of Storm
Water Pond

Boundary of
Wetlands

Lessons Learned - Problem Soils

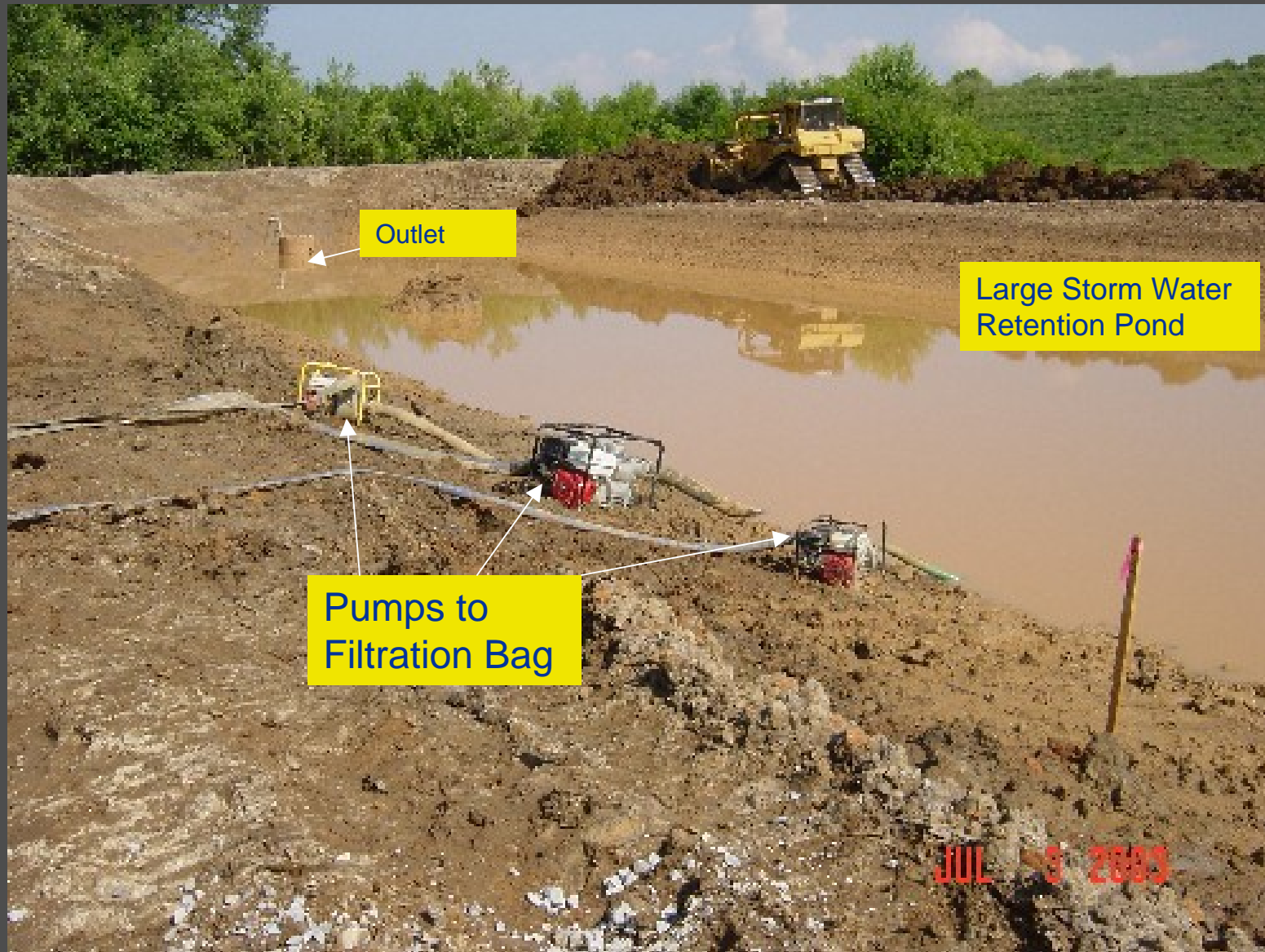


Grass Field

Filtration Bag

JUL 3 2003

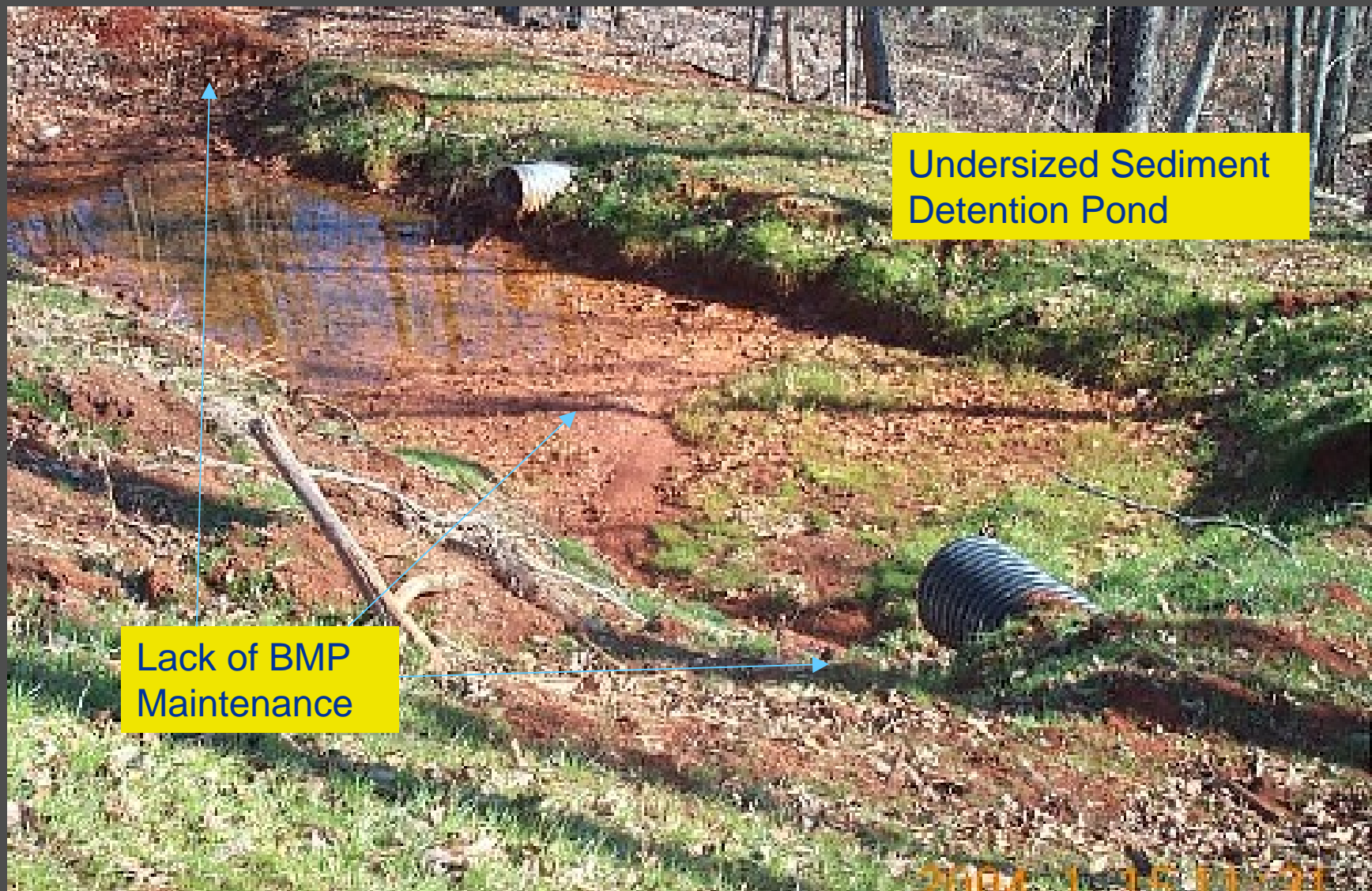
Lessons Learned - Problem Soils



Lessons Learned - Problem Soils

- THE SOLUTION REQUIRED CHEMICAL TREATMENT
 - Soils had to be tested
 - Polymers formulated specific for the soil
 - Formulation changed as project entered different phases

Lessons Learned - Steep Slopes



Lessons Learned - Steep Slopes



Lessons Learned - Steep Slopes



Double Row of Silt
Fence Overwhelmed
Also Very Poor
Maintenance

2015 7 27 09:31

Lessons Learned - Steep Slopes



Sediment Laden
Concentrated
Storm Water
Flowing Down the
Steep Slope

2004. 6. 25 11:33



Lessons Learned - Steep Slopes

Filled and
Overflowed in
10 minutes

Storm Water Flowing into
Sediment Detention Pond
at Toe of Slope

2004. 6. 25 11:34

Lessons Learned - Steep Slopes



Spring Fed Pond Received
the Sediment Laden Storm
Water

Sediment Remained
in Suspension for 30+
Days

2004-5-25-12:11

Lessons Learned - Steep Slopes



Lessons Learned - Total Disregard for the Environment



No Attempts to
Control Storm
Water

Access Road to
Mountain Top &
Side Development

2004-12-16 11:06

Lessons Learned - Total Disregard for the Environment



Lessons Learned - Total Disregard for the Environment

Poorly Installed
Stream Crossing



2004.11.5 11:28

Lessons Learned - Total Disregard for the Environment



Hanging Culvert
With No Energy
Dissipation

Lessons Learned - Total Disregard for the Environment



Lessons Learned - Good SWPPP but Poor Implementation

Improperly Installed
Control Structure

Lack of
Maintenance



Lessons Learned - Good SWPPP but Poor Implementation

Storm Drain
Protection?

This is Suppose to
be a Strom Drain

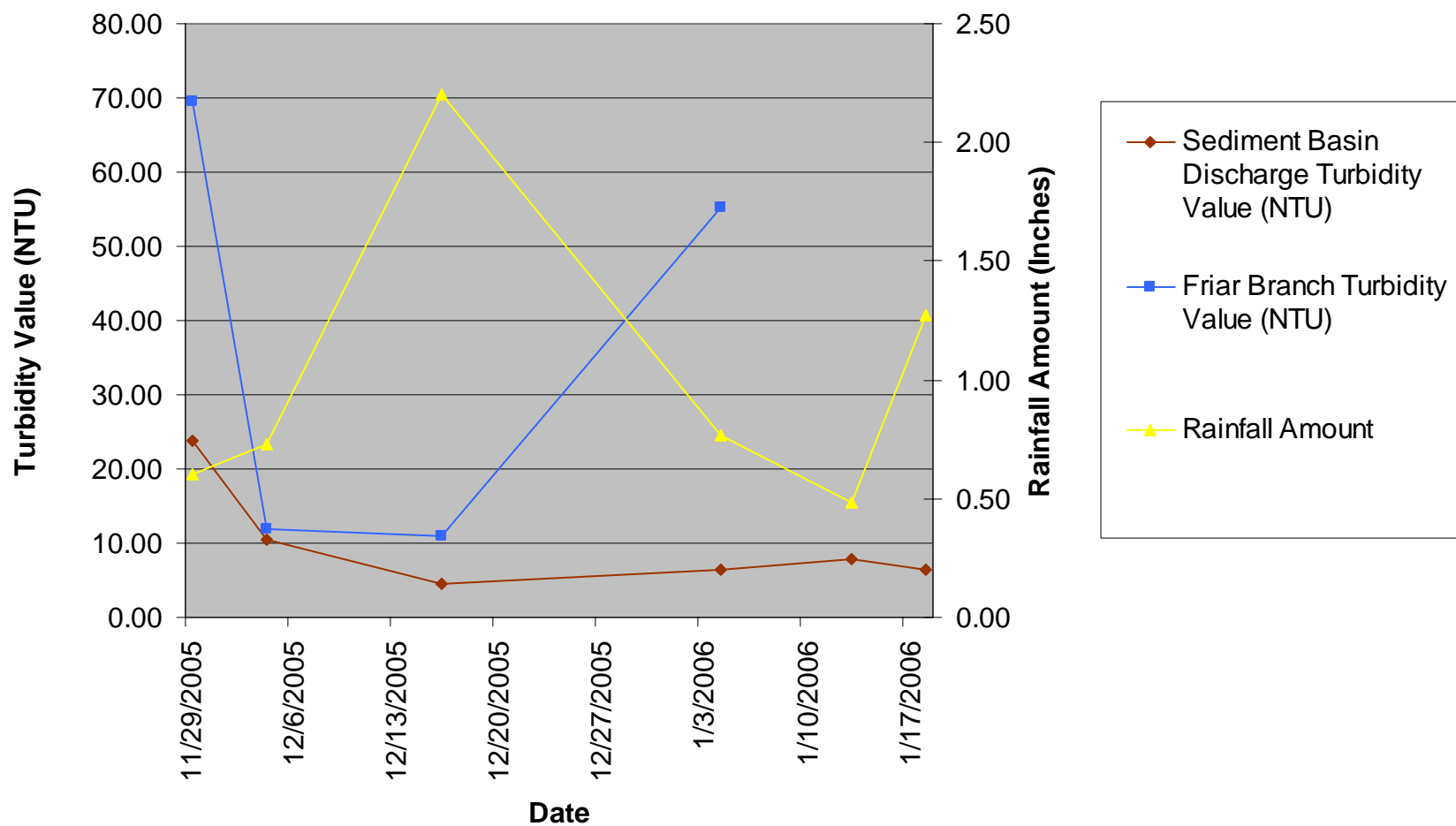
05.22.2006

Buffer Zones or Equivalent Treatment

- What is “equivalent treatment?”

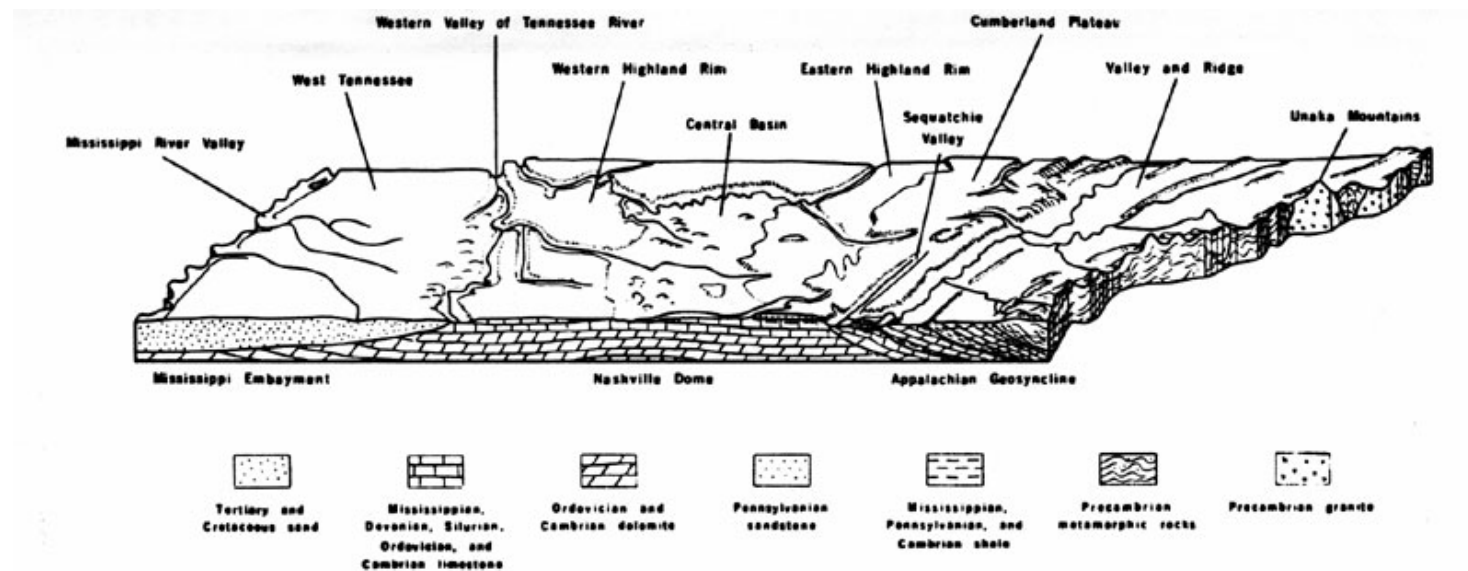
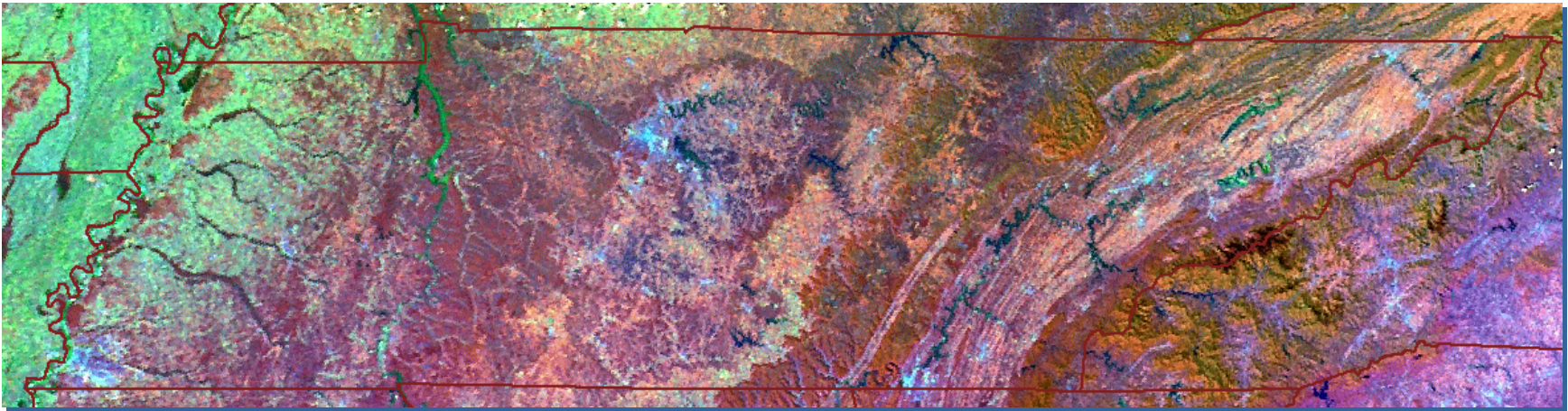
Date	Sediment Basin Discharge Turbidity Value (NTU)	Friar Branch Turbidity Value (NTU)	Rainfall Amount
11/29/05	23.70	69.60	0.60
12/04/05	10.50	NA	0.73
12/16/05	4.61	12.00	2.20
01/04/06	6.49	NA	0.77
01/13/06	7.95	11.00	0.48
01/18/06	6.34	55.30	1.27

NPDES Equivalency Monitoring



Parallel Individual ARAPs & Construction Storm Water Permits

- Should they be issued together?
- Should the Construction Storm Water Permit be issued prior to the ARAP?



RELIEF MAP OF TENNESSEE SHOWING THE RELATIONSHIP OF MAJOR GEOLOGIC STRUCTURES TO PHYSIOGRAPHIC UNITS

Source: (Miller, 1974).